What is claimed is:

1. A driving mechanism using shape memory alloys comprising:

a first and a second shape memory alloys coils mutually connected in series in the axis direction;

a pin-like drive member connected to said first and second shape memory alloys coils extending in the axis direction;

a drive circuit to supply electric current to said first and second shape memory alloys coils; and

a magnetic latch part to hold said drive member, characterized in that;

said first and second shape memory alloys coils are selectively electrically driven and heated by said drive circuit,

said drive member is moved in the axis direction by compressing or extending of said heated first or second shape memory alloys coils, and

said drive member is fixed and held in the axis direction by magnetically fixed to said magnetic latch part.

2. The driving mechanism using shape memory alloys as set forth in claim 1, characterized in that;

said magnetic latch part includes a magnet plate provided with a penetration hole through which said drive member is penetrated without contact, and a plurality of magnetic bodies provided to said drive member, and

said magnetic bodies are arranged mutually separated in the axis direction of the drive member, and said magnet plate is magnetized in the axis direction of said drive member.

3. A driving mechanism using shape memory alloys comprising:

a first and a second shape memory alloys coils mutually connected in series in the axis direction;

a pin-like drive member connected to said first and second

shape memory alloys coils extending in the axis direction;

a drive circuit to supply electric current to said first and second shape memory alloys coils; and

a magnetic latch part to hold said drive member,

characterized in that;

said magnetic latch part includes

a magnet plate provided with a penetration hole through which said drive member is penetrated without contact, and

a plurality of magnetic bodies provided to said drive member, and

said magnetic bodies are arranged mutually separated in the axis direction of the drive member, and

said magnet plate is magnetized in the axis direction of said drive member,

said first and second shape memory alloys coils are selectively electrically driven and heated by said drive circuit,

said drive member is moved in the axis direction by compressing or extending of said heated first or second shape memory alloys coils, and

said drive member is fixed and held in the axis direction by magnetically fixed to said magnetic latch part.

4. A driving mechanism using shape memory alloys comprising:

a plurality of groups of a module with a first and a second shape memory alloys coils mutually connected in series in the axis direction;

a drive member and a fixing member are arranged on one substrate; and

a magnetic latch part to hold said drive member, characterized in that;

said first and second shape memory alloys coils are sequentially connected in series as a natural length part, its extended part, or compressed part of the first shape memory alloys coil, the extended part, or compressed part, and its natural length part of the

second shape memory alloys coil in turn,

the series-connected part of one end of the natural length part and one end of the extended or compressed part of each of said first and second shape memory alloys coils is connected to the drive member via the fixing member arranged in an aperture part provided to said substrate, and said first and second shape memory alloys coils, said drive member, and said fixing member are movably held about in parallel to said substrate without contact to said substrate,

the other end of the natural length part of said first shape memory alloys coil and the other end of the natural length part of said second shape memory alloys coil are respectively connected to a ground electrode pattern provided to said substrate,

the other end of the extended or the compressed part of said first shape memory alloys coil and the other end of the extended or the compressed part of said second shape memory alloys coil are connected to a common electrode wiring pattern provided to said substrate,

said magnetic latch part includes a magnet plate and a plurality of magnetic bodies, said magnet plate is provided with a penetration hole through which said drive member penetrates without contact, and said magnetic bodies are mutually arranged separately in the axis direction, and

a drive circuit provided to said substrate selectively current-drives said first and second shape memory alloys coils, said drive member moves in the axis direction by extending or compressing said driven first or second shape memory alloys coils by heating, and said drive member is magnetically fixed to said magnetic latch part, thereby fixed and held at multi-steps in the axis direction.

5. The driving mechanism using shape memory alloys as set forth in claim 4, characterized in that said drive circuit has a shift resistor, and said plurality of groups of the first and the second shape memory alloys coils are current-driven by said shift resistor.

6. The driving mechanism using shape memory alloys as set forth in any one of claims 1, 3, or 4, characterized in that said magnetic latch part comprises one or more magnetic bodies provided to said drive member, and a latch member provided with a plurality of concave parts mutually arranged separately in the axis direction facing the displacement region of said magnetic bodies, and the concave part region of said latch member is magnetized.

7. A display device equipped with a driving mechanism using shape memory alloys comprising:

at least one driving mechanism using shape memory alloys;

a display sheet arranged in parallel to a magnet plate and having a penetration hole through which each drive member penetrates vertically; and

a control part into which data is input, characterized in that;

said driving mechanism is provided with a plurality of groups of a module wherein a first and a second shape memory alloys coils mutually connected in series in the axis direction, a drive member, and a fixing member are arranged on one common substrate, and a magnetic latch part to hold said drive member,

said first and second shape memory alloys coils are sequentially connected in series as a natural length part, its extended part, or compressed part of the first shape memory alloys coil, the extended part, or compressed part, and its natural length part of the second shape memory alloys coil in turn,

the series-connected part of one end of the natural length part and one end of the extended or compressed part of each of said first and second shape memory alloys coils is connected to the drive member via the fixing member arranged in an aperture part provided to said substrate, and said first and second shape memory alloys coils, said drive member, and said fixing member are movably held about in parallel to said substrate without contact to said substrate,

the other end of the natural length part of said first shape memory alloys coil and the other end of the natural length part of said second shape memory alloys coil are respectively connected to a

ground electrode pattern provided to said substrate,

the other end of the extended or the compressed part of said first shape memory alloys coil and the other end of the extended or the compressed part of said second shape memory alloys coil are connected to a common electrode wiring pattern provided to said substrate,

said magnetic latch part includes a magnet plate and a plurality of magnetic bodies, said magnet plate is provided with a penetration hole through which said drive member penetrates without contact, and said magnetic bodies are mutually arranged separately in the axis direction,

a drive circuit provided to said substrate selectively current-drives said first and second shape memory alloys coils, said drive member moves in the axis direction by extending or compressing said driven first or second shape memory alloys coils by heating, and said drive member is magnetically fixed to said magnetic latch part, thereby fixed and held at multi-steps in the axis direction, and

a display is conducted by the protruding quantity of each drive member corresponding to said data.

8. The display device provided with a driving mechanism using shape memory alloys as set forth in claim 7, characterized in that each tip of said drive member is arranged in a dot matrix on the surface of said display sheet.

9. A display sheet write-in device equipped with a driving mechanism using shape memory alloys comprising:

at least one driving mechanism using shape memory alloys;

a detachable display sheet arranged in parallel to a magnet plate and having a penetration hole through which each drive member penetrates vertically in the tip region of each drive member of said driving mechanism;

a display pin detachably inserted into the tip of each drive member; and

a control part into which data is input and write-in is

conducted on said display sheet by the protruding quantity of each display pin corresponding to said data, characterized in that;

said driving mechanism is provided with a plurality of groups of a module wherein a first and a second shape memory alloys coils mutually connected in series in the axis direction, a drive member, and a fixing member are arranged on one common substrate, and a magnetic latch part to hold said drive member,

said first and second shape memory alloys coils are sequentially connected in series as a natural length part, its extended part, or compressed part of the first shape memory alloys coil, the extended part, or compressed part, and its natural length part of the second shape memory alloys coil in turn,

the series-connected part of one end of the natural length part and one end of the extended or compressed part of each of said first and second shape memory alloys coils is connected to the drive member via the fixing member arranged in an aperture part provided to said substrate, and said first and second shape memory alloys coils, said drive member, and said fixing member are movably held about in parallel to said substrate without contact to said substrate,

the other end of the natural length part of said first shape memory alloys coil and the other end of the natural length part of said second shape memory alloys coil are respectively connected to a ground electrode pattern provided to said substrate,

the other end of the extended or the compressed part of said first shape memory alloys coil and the other end of the extended or the compressed part of said second shape memory alloys coil are connected to a common electrode wiring pattern provided to said substrate,

said magnetic latch part includes a magnet plate and a plurality of magnetic bodies, said magnet plate is provided with a penetration hole through which said drive member penetrates without contact, and said magnetic bodies are mutually arranged separately in the axis direction,

a drive circuit provided to said substrate selectively current-drives said first and second shape memory alloys coils, said

drive member moves in the axis direction by extending or compressing said driven first or second shape memory alloys coils by heating, and said drive member is magnetically fixed to said magnetic latch part, thereby fixed and held at multi-steps in the axis direction, and

said display pin is latched to said display sheet depending upon the axis direction moving quantity of said each drive member, said display pin is detached from said drive member, thereby is fixed and held to the display sheet by magnetism of said latch part.

10. A display sheet, characterized in that data is written in by the display sheet write-in device equipped with a driving mechanism using shape memory alloys as set forth in claim 9.

11. A driving mechanism using shape memory alloys comprising:

a first and a second shape memory alloys coils mutually connected in series in the axis direction;

a drive member made of a magnetic body material connected to said first and second shape memory alloys coils;

a drive circuit to supply electric current to said first and second shape memory alloys coils; and

a magnetic latch part to hold said drive member, characterized in that;

said magnetic latch part has a plurality of concave parts mutually arranged separately in the axis direction, and said concave part region is magnetized,

said first and second shape memory alloys coils are selectively current-driven and heated by said drive circuit, and

said drive member is moved along a plurality of concave parts of the latch part by compressing or extending said heated first or second shape memory alloys coil, and said drive member is magnetically fixed to said magnetic latch part, thereby fixed and held.

12. The driving mechanism using shape memory alloys as set forth in claim 11, characterized in that said first and second shape

memory alloys coils comprise a extended part or a compressed part, the ends of the extended or the compressed part of said first and second shape memory alloys coils are mutually connected in series, the series-connected part of said first and second shape memory alloys coils is connected to said drive member to be a common electrode, both ends not series-connected of the extended or the compressed part of said first and second shape memory alloys coils are connected to both ends where are not provided a plurality of concave parts of said latch member to be a ground electrode.

13. The driving mechanism using shape memory alloys as set forth in claim 11, characterized in that said latch member itself is magnetized.

14. The driving mechanism using shape memory alloys as set forth in claim 11, characterized in that a magnet is provided to the backside of said latch member.

15. The driving mechanism using shape memory alloys as set forth in claim 11, characterized in that the concave part of said latch member is arranged in a bending shape.

16. The driving mechanism using shape memory alloys as set forth in claim 11, characterized in that the concave part of said latch member is made flexible to bend.

17. The driving mechanism using shape memory alloys as set forth in claim 11, characterized in that said latch member is further provided with a magnetic sensor.

18. An optical device equipped with a driving mechanism using shape memory alloys and a drive part driven by said driving mechanism, characterized in that;

said driving mechanism comprising:

a first and a second shape memory alloys coils mutually

connected in series in the axis direction;

a drive member made of a magnetic body material connected to said first and second shape memory alloys coils;

a drive circuit to supply electric current to said first and second shape memory alloys coils; and

a magnetic latch part to hold said drive member, and

said magnetic latch part has a plurality of concave parts mutually arranged separately in the axis direction, and said concave part region is magnetized,

said first and second shape memory alloys coils are selectively current-driven and heated by said drive circuit, and

said drive member is moved along a plurality of concave parts of said latch part by compressing or extending said heated first or second shape memory alloys coil, said drive member is magnetically fixed to said magnetic latch part, thereby fixed and held, and

the drive part of said optical device is fixed by the drive member made of a magnetic body material of said driving mechanism, and its position is drive-controlled.

19. The optical device equipped with the driving mechanism using shape memory alloys as set forth in claim 18, characterized in that the drive part of said optical device is a drive part of an optical fiber.

20. The optical device equipped with the driving mechanism using shape memory alloys as set forth in claim 18, characterized in that the drive part of said optical device is a drive part of a lens.

21. A catheter equipped with a driving mechanism using shape memory alloys, characterized in that;

said driving mechanism comprising:

a first and a second shape memory alloys coils mutually connected in series in the axis direction;

a drive member made of a magnetic body material connected to said first and second shape memory alloys coils;

a drive circuit to supply electric current to said first and second shape memory alloys coils; and

a magnetic latch part to hold said drive member, and

said magnetic latch part has a plurality of concave parts mutually arranged separately in the axis direction, and said concave part region is magnetized,

said first and second shape memory alloys coils are selectively current-driven and heated by said drive circuit, and

said drive member is moved along a plurality of concave parts of said latch part by compressing or extending said heated first or second shape memory alloys coil, and said drive member is magnetically fixed to said magnetic latch part, thereby fixed and held.